

U.S. ARMY CORPS OF ENGINEERS

NEW ENGLAND DIVISION

PUBLIC HEARING held at the Nahant Town Hall,
334 Nahant Road, Nahant, Massachusetts on Monday,
December 10, 2001, commencing at 7:30 p.m.

concerning:

PROPOSED MARITIMES PHASE III/HUBLINE PROJECT

BEFORE:

Larry Rosenberg, as Moderator

Appearances:

Keegan, Werlin & Pabian, LLP

(by Jon N. Bonsall, Esquire)

21 Custom House Street

Boston, MA 02110

for the Petitioner

MARIANNE KUSA-RYLL, RMR

JUSTICE HILL REPORTING

252 JUSTICE HILL ROAD, P.O. BOX 610

STERLING, MASSACHUSETTS 01664-0610

TELEPHONE: (978) 422-8777 FAX (978) 422-7799

I N D E X

Speakers:	Page
Richard Lombard	3
Paul White	55
Polly Bradley	63
Joseph Ayers	67
Carole Shutzer	74
John Benson	79
Jane Bright	83
William Crawford	87
Dorothy Allen	88
Mike Rauworth	94
Joel Marie	98
Mark van der Velder	102
Tom Costin	106
Skip Frasy	112
James Walsh	113
Peg Heinrich	114

PROCEEDINGS

SELECTMAN LOMBARD: Good evening, everyone. My name is Richard Lombard. I'm Chairman of the Board of Selectmen in the Town of Nahant.

I would like to welcome you to the Town of Nahant.

I would like to personally thank -- where is she -- Polly Bradley, and her SWIM committee.

Mike Manning. Mike, are you there? Mike is a member also of SWIM, and an original member of the SWIM Committee, also a member of the Board of Selectmen, with you tonight.

We also have Doctor Joe Ayers. Where is Joe? Is he here somewhere. I appreciate the residents coming in, as well as the residents of Swampscott and Marblehead, Revere and Lynn.

Thank you very much.

I especially appreciate Larry Rosenberg, Director of Public Relations for the Corps of Engineers, coming down to this small community, which happens to be the smallest community in the Commonwealth of Massachusetts, but we get more help

and more assistance in the North Shore area,
especially with these environmental issues.

Again, I want to welcome you all to
Nahant. I am now going to introduce Larry
Rosenberg, Director of the U.S. Corps of Engineers
as well.

Larry.

(Applause.)

MODERATOR ROSENBERG: Good evening.

This is really nice to be back in Nahant.

As you heard, my name is Larry
Rosenberg. I am the Chief of Public Affairs to the
Army Corps of Engineers, and I would like to welcome
you here tonight to this public forum where we
together with the permanent applicant, Maritimes &
Northeast Pipeline, will listen to your comments and
your insights on the applicant's proposed activity
and their request for a federal permit under
Section 10 of the Rivers and Harbors Act and
Section 404 of the Clean Water Act.

I also would like to welcome -- thank
you for involving yourselves in this environmental
review process.

You see, we are here tonight to listen

to your comments, to understand your concerns, and to provide you an opportunity here on the record should you care to do so. This forum is yours.

With me tonight are members of the Corps' district staff: Mr. Ted Lento, who is our Permit Manager; Mr. Tim Dugan; and Ann Marie Harvie from the Corps' Public Affairs Office.

In addition, the permit applicant is represented by Gus McLachlan, with -- who is representing the entire project team for HubLine Maritimes & Northeast. The entire project team are here tonight not only to provide you with an overview of the activities, but to listen to your concerns and answer your questions.

Now, it's very important that you know that no decision has been made by the Army Corps of Engineers with regard to this permit application. Furthermore, the Corps is not here to defend any aspect of the proposed activity. We are here to listen to what's on your mind concerning this proposed pipeline. You should know that before any decision is made, we must take into consideration both the environmental concerns, and all the issues that are of concern to you, the citizens of

Massachusetts.

What we'll do here tonight is listen to a short overview, 30 or 40 minutes, from the current applicant, and then we'll open the floor to your questions and your statements so you can make your views known. Feel free to bring up any and all concerns that you feel should be discussed.

There seems to be a lot of people here, so try to limit your remarks, or whatever, to a couple, four, five minutes.

Lastly, when this forum is concluded, you're invited to continue the dialogue with any of the Corps' representatives, or anybody representing the permitting applicant.

Now, the rules for forum are thus: If you have a question, you ask it; if you have got something to say, you say it; if you wish to go on the record, please; and lastly, if you want to involve yourself in this environmental review process not just tonight, but into the future, please let anyone of us know and fill out those blue cards with your address on them.

You know, as a direct result of having this type of process, we have been able to overcome

many of the difficulties other agencies face during these public review hearings.

Although we are here tonight to understand your concerns and discuss the applicant's proposed activities, we need your input throughout the entire process. Your involvement is not only requested. Your involvement is necessary, especially those of you impacted by this project, to assist us in the entire environmental review. We need to know your concerns. We need your advice, and we need your expertise. So I thank you very much for coming.

Ladies and gentlemen, Gus McLachlan, representing the permit applicant.

SELECTMAN LOMBARD: Excuse me. Just one more. Tommy McGee, our State Representative, Tommy is here. Let's welcome him.

(Applause.)

SELECTMAN LOMBARD: We also have a third member of the Board of Selectmen, Skip Frary.

(Applause.)

SELECTMAN FRARY: Thank you very much.

MR. McLACHLAN: Thank you. My name is Gus McLachlan --

AUDIENCE PARTICIPANT: Gus, that is not turned on.

MR. McLACHLAN: There you go. Gus McLachlan, Environmental Manager for HubLine and Maritimes & Northeast Pipeline Project.

On behalf of the project team, I want to thank the Town of Nahant, SWIM, the Army Corps of Engineers for hosting this meeting tonight. I'll be brief. We have a presentation to show you. Other people will be presenting. Jon Bonsall will give you a project history. Mike Tyrrell will go through the permitting phase of the project and give you an update on that; and then Leon Proper will give a presentation on offshore construction, which you can expect to see off the waters of the towns up and down the coast here.

One question I have is we found tonight a lot of this is going to be geared for offshore, but one question I have for everybody is how many people are here from the onshore portion, the Maritimes & Northeast on land portion?

(Whereupon, there was a show of hands.)

MR. McLACHLAN: And we'll cover and do an update on that, also.

With that, I'll turn it over to Jon

Bonsall to give you a project update.

MR. BONSALL: Thanks, Gus.

Thanks again. What I'm going to do is give you a little bit of the background on the project, the genesis of this endeavor.

I'm assuming I can do the buttons correctly.

Essentially, this project is intended to bring additional supplies of natural gas down from Sable offshore -- the area offshore of Sable Island near Nova Scotia.

Recent developments there indicated that it's a significant source of natural gas for the New England and Massachusetts area.

In terms of the development of the Sable Offshore Energy Project, there are a number of major companies involved in that: Mobil Oil Canada, Shell Canada, et cetera. In order to bring that gas supply down into the New England area and into Massachusetts, a group of companies came together: Duke Energy, West Coast Energy, ExxonMobil, and Nova Scotia Power and formed Maritimes & Northeast Pipeline Company, and it's presently Maritimes &

Northeast that has a pipe running from Nova Scotia. It's connected from Sable Island. There is offshore lines that bring it into Nova Scotia, and then it's an onshore pipeline that goes through the provinces of Canada, through the State of Maine, New Hampshire, and the present terminus of that is in Dracut, Massachusetts. That project was essentially constructed in 1999 and became operational early in the year 2000.

As I indicated, Sable gas is really the first supply of natural gas to be connected to North America in the last 25 years. And for the New England area, the real importance of the fact that it's almost a thousand miles closer to New England than any previous sources or supply of natural gas. And, very critically, the estimated reserves could, in fact, exceed the Gulf Coast. That's a significant amount of natural gas that is present offshore Nova Scotia.

Recently, Canada entered into an agreement in June of this year in order to supply additional gas supplies from a new supply field that they are developing. And just last month, Canada Nova Scotia's Offshore Petroleum Board issued

additional exploration licenses to continue the exploration of finding gas in the Sable Island region.

The purpose of the Maritimes Phase III Project and the HubLine Project, and these are really first cousin projects. You will hear it somewhat referred to interchangeably. Phase III is the land portion going from Methuen, Massachusetts down to Beverly Harbor. The HubLine portion goes from Beverly Harbor to Weymouth, with a lateral over to Deer Island.

Essentially, it brings a new gas supply into Eastern Massachusetts. It provides a new delivery point. The land portion is approximately 25 miles. It's a 30-inch diameter pipe and again connects to the HubLine Project in the Beverly area.

This, the Phase III project, is intended to be in service in 2002. When Leon Proper gets up later, they have a construction schedule to walk you through the HubLine portion in terms of the relevant time period relating there.

Again, as I indicated, right now there is a pipeline that comes down and terminates in Dracut, which is off this map. Maritime's Phase III

would connect with the existing pipe up in Methuen and follow for 70 percent of its route an existing utility corridor, electric transmission corridor, and it would start up in Methuen, go through Haverhill, Boxford, Andover, Middleton, North Reading, Danvers, Peabody, Salem and into Beverly Harbor.

HubLine would then pick up in the Beverly Harbor area, and be offshore coming down into this area, where down in Weymouth it connects with the Sithe Energy Plant that is under construction there at the old Edgar facility in Weymouth that used to be owned by Boston Edison Company and is also the Deer Island lateral.

Again, we have another map that later in the presentation we'll walk you through with some additional detail. This gives you an overview of this project, these two projects, I should say.

One of the questions is why is the project being developed?

And there are a number of benefits to our area. Obviously, you can read the bullets there, but one of the ones I wanted to point out, or a couple of them. Last winter, it's a little

difficult to remember since last Thursday was 70 degrees here, but if you think back a year ago, you had one of the coldest Novembers and Decembers that we had in quite some time. There was very significant price hikes in the New England area. As that was occurring, however, for the first time, we saw the price of natural gas in Boston was essentially the same as the price of natural gas in New York City. Normally, Boston pricing, because it is further in on the end of the pipeline is higher, and that differential was attributable to the fact that you now have competitively priced gas coming from Sable Island. So if that is a hike's worth, it should have been higher, but for the fact that the Maritime & Northeast had gas flowing over the pipe.

A lot of people, you know, know well the experiences that California had in the past year. This is a type of energy supply that would help New England and Massachusetts avoid that; and back some months ago, an organization called ISO-New England, the independent system operator of the electric transmission grid, issued a report that basically said in the year 2003, or the winter of 2003, there was a significant chance of energy or a natural gas

shortfall, and clearly there would be a shortfall in the winter of 2005; however, in that same report -- this report came out very early in the regulatory process for these projects. They said if, in fact, either HubLine or Maritimes Phase III came on line, those anticipated shortfalls disappear, and there are also some reliability and system improvements that would also arise from the completion of these projects. So those are some of the benefits.

And the Conservation Law Foundation, and I did see some of the material that SWIM put out in terms of their sharing a common interest with the Law Foundation in terms of cleaning up the air.

The Conservation Law Foundation talked about a year or so ago about the opening of the Nova Scotia pipeline as providing the ability for the new electric generation plants that were coming on line to make significant improvements in terms of air emissions in the region. So this was a clear additional benefit that we would derive from the project.

In terms of the permitting process, this is an interstate natural gas pipeline project. As

such, the primary responsibility for the review and initial determinations is with the Federal Energy Regulatory Commission. We spent about a year and a half, my friends from Peabody, who we know well and had many meetings together over the first couple of years. We have been in meetings with people from about a year and a half before we ever filed the applications. And we did file with FERC in October of 2000. FERC issued a preliminary determination in April of 2001 essentially confirming that the project had demonstrated need in terms of the benefits that we were proposing.

A Draft Environmental Impact Report came out last July.

But more importantly, a few weeks ago, a Final Environmental Statement came out, the FEIS. And in that, FERC essentially -- the FERC staff has recommended or determined that the project has shown that the construction operation resulted in limited environmental impacts, and then they had a number of recommendations in terms of mitigation measures that went to further address the environmental impacts.

This section, I am going to turn it over to Mike Tyrrell to walk you through the MEPA process

and a little bit of the other environmental reviews.

Mike.

MR. TYRRELL: Thank you. I am Mike Tyrrell with TRC Environmental, and I have been involved in the project since its inception about 24 months ago plus. It has been a -- from the permitting process, it has been a coordinated effort between the federal and the State of Massachusetts agencies.

Early on, and you'll see on the first slide I have, it's the MEPA process. Early on when we initially filed our FERC filing back in October of 2000, we also met with the Secretary of Environmental Affairs office and talked with the MEPA staff about the best way to go about coordinating review for the project, both to incorporate the federal review process at the FERC level, as well as some of the key state interests, because, you know, frankly, it is a state project. It affects the state far more than it does FERC down in Washington.

So one of the things we did agree upon was, and this was done also on the joint facilities project that was constructed. It's a Maritimes

Portland natural gas facility that was constructed up in the Haverhill, Dracut, Methuen area back in 1998.

We embarked on essentially what we call a coordinated review, where the Final Environmental -- the Draft Environmental Impact Statement and the Final Environmental Impact Statement issued by FERC will also double as our environmental -- state Environmental Impact Report review process.

It's a little new in that it does take some -- some effort on behalf of the agencies here in the state to move into the project and get their issues outlined and up front a lot earlier than they normally would. So when we first filed our ENF in October, that is when we triggered that process, and we essentially began with an agency review with some of the key -- key agency folks from the National Fisheries Service, the Division of Marine Fisheries, the EPA as well as others. We sat down in Boston, and we talked through how to best address the state issues in the federal process. And the documents that Ted has out on his desk, that's the Final Environmental Impact Statement. That is essentially

the culmination of where that stands.

Back in September, the secretary issued a certificate on our Draft Environmental Impact Report. And, again, the DEIR consisted of a company filing plus the FERC Final Environmental Impact Statement. So again a coordinated effort on both parties to pull together a single environmental review.

We are planning right now to file a Final Environmental Impact Report at the end of January, and that essentially will bring together a lot of the information that has been out there that is in the FEIS; and again, some of the materials that we have been meeting with on the agencies with respect to mitigation, as well as a comprehensive Marine Environmental Monitoring Program that I will get to in a moment.

These are again some of the other agencies and processes that we are working through: FERC, that we talked about before, which clearly we are here for tonight; the EPA and cooperating agencies through the Corps process, as well as through the FERC process; the U.S. Fish and Wildlife Service; and then National Marine Fisheries Service

and the Coast Guard have all been very active in this project and have been very active in both the state and the federal environmental review.

Specific to the state process, I just talked through the MEPA process. CZM, Coastal Zone Management, clearly is a very important agency that we have been working through for the -- predominantly the HubLine Project. They, in fact, were a cooperating agency through the FERC process.

And if you look at the documentation in the EIS, that FERC issue, and it clearly states that CZM took an active role in that process as well, and many of the recommendations suggested by CZM have been incorporated, in fact, by FERC.

Some of the others, the Department of Environmental Protection, we're issuing essentially filings with them. We have already made our initial state filings with the DEP back when we filed our FERC project, which again went well over a year ago now. We have been working with them through the -- through this time, and again we are preparing to submit a supplemental filing, if you will, that incorporates a lot of the issues that FERC has

brought up, and we have been working on for quite some time. The DEP issues are both related to the Maritimes Phase III project, the inland piece, as well as the issued related to HubLine.

DEP also is -- will have to issue a waterways license under Chapter 91 predominantly specific to HubLine, although there are a couple Phase III facilities involved. So DEP has been very active as well.

The DEM again has issues related to the HubLine and the Phase III project, and DEM has been again very active. SHPO, Natural Heritage, and the Highway Department are some of the other permitting agencies that we will be working with.

This is kind of where we stand right now. Besides our Final Environmental Impact Report in January, we will be updating other state processes in late December, this month, and early January; but right now, we are beginning the municipal conservation commission process, both for the Phase III project and for HubLine. The Company is committed to going before each local conservation commission and the municipalities that are crossed by both projects, and we are beginning that process

on the Phase III side of the project where the first meetings are actually going to be happening in the next few days up in the North Reading area.

Some of the others, public works, fire departments, and the harbor masters will get all active. This is when I am going to pass it back to Jon to talk a little bit about the siting process.

Again, it has been a long process with two years of environmental review that the Company has taken to essentially bring the routing to where it is today. It has been a culmination of both FERC's evaluation, the state's evaluation, and the company's own siting criteria evaluation.

Jon.

MR. BONSALL: Thanks, Mike.

Again, one of the things FERC has encouraged interstate gas pipeline projects to do now is to get out early and have meetings like this; for example, but also it is and, you know, clearly when you are dealing with a land-based portion of the route, it is very important to be out there to talk to the landowners. So I think our first community meeting was back in November of 1999, in the Town of North Andover.

And that is part of the process where we are evaluating beginning to contact landowners to get survey permission, work with the local municipalities in identifying issues; and then in particular, trying to evaluate potential alternative routes that then go to FERC for review and information.

We also hosted open houses prior to actually filing the FERC application. They are sort of like a science fair. There is a lot of information presented with different phases where people have an opportunity to get information about what is happening. Then we filed the application with FERC; and as part of the process, we actually are -- we submit copies of the application to each of the Boards of Selectmen and Town Clerk, the conservation commissions in the communities, et cetera, et cetera. So we try to get a fair degree of information out.

In terms of the offshore portion, similar type work was going on in terms of contacting various agencies. We have had a number of meetings with the Mass. Lobstermen's Association, going back two years to be sure that we were on top

of some of their concerns and issues as we were beginning to develop the project, and a lot of geotech work and other things were happening offshore to help better define the route there.

So at this point, I am going to turn it over to Leon Proper, form Project Consulting Services, to walk you through the route offshore on some of the work that went in and some of the construction techniques that will be involved.

MR. PROPER: Thanks, Jon.

The first thing I would like to do is walk you through the route itself and give you some idea about the techniques we use for construction of the pipeline.

As Jon mentioned, we will start up in the Salem/Beverly area, and proceed offshore from there, right about here, make our turn, come down into the precautionary area, which is a major anchorage for us; come down this way, pass underneath the southeast end of Georges Island, and move into the Weymouth Fore River area. And then there is a lateral that runs from the main line through the precautionary area, through Broad Sound and the landfill up on Deer Island.

The pipeline will be laid on bottom by a lay barge. We'll show you some pictures of all this equipment here in just a minute, but that will commence at the start and run for the entire length of the project. Along the route, we'll bury the pipeline using four different techniques.

At the beach approaches, near shore areas, we use a technique called horizontal directional drilling, which will allow us to drill from the beach, underneath, rather from the land, underneath the beach, and exit out into the harbor area.

The second process we will use is conventional bucket dredging where we will predig a ditch into which the pipeline will be laid.

The third method is the use of a plow, which is pulled over the pipeline once it's laid, digging a trench out from underneath the pipeline and allowing it to settle in such that it would be approximately three feet over the top of the pipe.

The fourth method involves initially the same plow technique, but then the use of a pipeline jet, which further digs the trench down to about 13 feet deep, with the pipeline again lowering

itself to the bottom of that trench. The trench would then be refilled using existing spoil from the trench that had been dug, the material that had been moved from the trench initially, and then with imported backfill, should there not be enough material left when it's time to backfill.

The horizontal directional drills will be one here from Salem to Salem Harbor; one across Beverly Channel here; one crossing under Georges Island, one down at the landfall at Weymouth near the Sithe Energy Plant; and then one going ashore here at Deer Island.

The major equipment we will use along the way includes the lay vessel, the lay barge, which will be responsible for welding and laying the pipe on the bottom. There will be two different vessels, one pulling a plow, the other pulling a jet, and then there will be various support equipment, like a diving vessel.

AUDIENCE PARTICIPANT: Are you done with that?

MR. PROPER: Sure. It's in the way.
Put it back here.

And then we'll touch a bit on horizontal

directional drilling units to see what those look like.

This is a schematic of an offshore lay barge. We have got a picture of one in just a moment, but just to point out some of the highlights. These vessels are all secured or moored with an anchoring system. The lay barge, the plow barge, the ferry barge and the jet barge will all utilize a similar anchoring system throughout the project.

In areas of 20 feet or less, we will be using spuds. We won't be running anchors out there in the shallow water areas. We will be using a spud-moored vessel. Each joint of pipe, 40 feet long, is added to the front of the line near the bow of the barge. There is a series of welding stations that weld it together. Then there are a series of coating stations that apply the corrosion coating to the outside of the pipe; and once that is installed, there is a series of -- there is a station in which some fill material is added to take the place of the concrete that is missing in that particular weld area.

The pipe itself is carbon steel. It is

covered with a corrosion coating internally and externally. It also has about two and a half to three inches of concrete around the outside of it to give it enough weight to withstand whatever environmental conditions it might be exposed to during its life, so it's always stable on bottom. It's weight moving. As that pipe comes off the barge, it passes over a stinger, which is just a support mechanism to allow the pipe as it moves down towards the bottom to achieve a reasonable curvature so that it doesn't kink at the stern of the barge.

The pipe will be staged in an onshore yard where it will be coated with concrete and stored until time for it to be laid offshore. It will then be transported offshore on pipe haul barges. That will be handled by tug boats, as is the main vessel itself. It is also towed in position with a tug boat, and that same vessel positions its anchors and moves them as the lay barge dresses along the pipeline.

Here is a picture of a typical lay barge. You can see here on the bow the 40-foot joints of pipe are loaded into this station, and there are a series of welding stations, and then the

coating stations towards the stern before it passes over the stinger. You see here the tug boat is actually positioning -- covering one of the anchors now in anticipation of moving it out and setting it into position.

Once the pipeline is laid, we'll follow it up initially with a plow vessel. The plow itself is positioned over the pipeline, and pull it along the line by the lay barge. There is a pulling line that runs from the barge to the plow. It's pulled along the route; and as it does so, there are stairs that meet the pipe that pull the soil up out of the trench and deposit it along the side of the pipeline.

This is again the same type mooring system as we saw previously.

AUDIENCE PARTICIPANT: So the plow is actually towed?

MR. PROPER: It's actually pulled, yes. It's pulled. The complete line is laid and then would come back and start again.

AUDIENCE PARTICIPANT: With the plow?

MR. PROPER: With the plow. Our current plan is to have a second lay barge -- excuse me -- a

second barge on site to pull the plow as soon as the lay barge has laid enough pipe on bottom to facilitate allowing another barge to come in behind it and start pulling the plow.

AUDIENCE PARTICIPANT: Or the plow actually moving themselves moving around their anchors, correct?

MR. PROPER: That's correct. And there is a pretty intricate survey system that ties the anchor positions, the vessel itself and the tug boat so that it's all a very coordinated process as it moves along.

AUDIENCE PARTICIPANT: Has one of these ever been used before?

MR. PROPER: A plow?

AUDIENCE PARTICIPANT: Of this sort?

MR. PROPER: Yes, sir. It's being used in the Gulf of Mexico. In fact, I'll show you a picture in just a moment, the one that is in use.

AUDIENCE PARTICIPANT: Your bottom conditions in the Gulf tend to be soft and mucky compared to the latent rock we have here.

MR. PROPER: It's yes and no. There are, as we can see here, but also the silt and sand

in place that we see here is pretty typical. Where we do see typical materials of this nature is in the North Sea, which is where most of these plows have been used for the last 15, 20 years. It is just recently that this has begun to be used in the U.S.

AUDIENCE PARTICIPANT: How do you get them over those rocky ledge areas?

MR. PROPER: With rocky ledge areas, we will not be plowing through. It's actually cutting sandstone down in Florida right now, but that's not quite as hard as what we are going to face here. So our intent is to plow the areas that are plowable, skip the bedrock areas, which we actually had planned to clear prior to laying pipe and to go out and blast a trench and do that area.

The plow, as you can see, there is a bridle on the bow that is pulled, pulled ahead. The pipe actually rides through the plow, and there are shearers underneath that push the spoil up here onto the edge. The spoil is omitted for clarity, but it actually piles up along the edge of the right of way right up here.

That is what a plow looks like. That's a typical plow. Each contractor's plow is a little

different in design. Here is a six-footer, to you get some idea about the dimensions. It's about 120 tons of mass.

And you can see, too, the shears here as they move along the route. They move the soil up and out of the trench and pile it up alongside.

In the areas in which we intend to go to 10 feet of cover over the top of the pipe, the plow does not have the capability -- the plow is limited in how deep it can dig a trench. It's limited to about eight feet, some seven, but about eight feet deep. In order to achieve 10 feet of cover over the top of the pipe, we need about a 13-foot trench. In order to do that, we utilize a jetting machine. A jetting machine is towed by essentially the same type vessel that tows the plow.

It's placed over the top of the pipe, and it uses water and air -- one more. It uses water and air to both cut the soil underneath the pipe, and then the air to eject it up out of the trench. These purple nozzles are -- the water is jetted through those nozzles to cut the soil, and then in this blue area here and here, there are air lifts that pull the soil/water mixture out and cast

it off to the side of the trench. This, too, is pulled by the barge.

AUDIENCE PARTICIPANT: There is no backfill behind that though, correct?

MR. PROPER: There is no backfill immediately behind it, no. Our intent is to pull a backfill plow that I'll get to in just a moment.

This is a typical jet barge. It will contain water pumps and air compressors on board. The jet itself is positioned down over the pipeline, and then there are two hoses that are connected to it, one for the operation of water and one for the air. You can see here the conductors through which the water and soil slurry is cast out to the side of the trench.

Just in general, you see that the plow, as -- the pipe is not shown for clarity in this particular trench, but the soil is cast up onto the side. Then as the jet passes over, you can see we get about 13 feet. Each one of these will take -- we anticipate taking two passes. As the plow cuts the eight-foot trench, it generally does it four feet at a time; otherwise, the loads would be too high with pulling vessels. So it cuts two

passes. It cuts down eight feet, and we think it will take an additional two passes of the jet to get it down to a total of 13 feet.

Once those two processes are complete, those four passes or so are complete, we then pull a backfill plow along the route. Remember those spoil mounds that existed along either side of the route. Well, this plow uses reverse boards that pull it, and when pulled along the pipe, channels the spoil back into the trench and refills the trench over the top of the pipe.

MR. TYRRELL: Leon, can you just locate the deeper vertical locations one more time.

MR. PROPER: Yes.

MR. TYRRELL: That is not everywhere that's going to happen.

MR. PROPER: Right. Good point.

Currently, the information that we have is that the major anchorages are through the precautionary area, along the Deer Island lateral, up in the Beverly Harbor/Salem area, and also down here in the anchorage where it closes, we planned to bury the pipeline in 10 feet of cover, such that the top of the pipe will be 10 feet below the bottom of the

bay. We will then refill with the existing spoil; and then if there is not enough remaining, due to currents or whatever reasons, we then import additional backfill to fill the trench back up.

AUDIENCE PARTICIPANT: Excuse me. What proportion of the total extent of the pipe would be buried? 90 percent? 60 percent?

MR. PROPER: No, I think the total is 35 miles. I think 50 or 60 percent would be buried to 10 feet cover. The remaining section, which is through here (indicating), with the exception of this point, and then all this would be three feet of cover; and then from outside of the precautionary area down to the north side of Georges Island, jumping the island down to the anchorage would be three feet; and then from there on into the shallow waters of Weymouth.

AUDIENCE PARTICIPANT: How long would any one 100-yard piece be exposed, once you start digging towards Weymouth? It would be covered up. How long would that generally take, let's say a hundred yards?

MR. PROPER: Well, each -- the vessel moves along, and depending on the soil, somewhere

between a half a mile to a mile a day. I mean that can be impacted by weather, of course, but...

AUDIENCE PARTICIPANT: Excuse me. What is --

MR. PROPER: If it took five passes to complete it, it would be weeks, a number of weeks.

AUDIENCE PARTICIPANT: When you say there is a pass, including running the whole route or a defined segment, you can go back and rework that segment?

MR. PROPER: Right now it's our plan to run the route. It will be as fast, just because of the need to try to complete, and to try to fit it in the time limit we will talk about in just a minute.

AUDIENCE PARTICIPANT: So for each of the pieces here you have shown us, that thing is going to go from north to south, a full stop before you start over for a second pass?

MR. PROPER: That's the way we've assumed it at this point. We are just now getting ready to go out for bids to the various contractors, and they may have a way to do that that is different, but we assume that process from here.

AUDIENCE PARTICIPANT: Does the second

pass have to wait until the first pass has reached the end of the route before it can start up at the other end?

MR. PROPER: It probably will, because we will only have one vessel with the plow on the project at any one time.

AUDIENCE PARTICIPANT: How disruptive would a significant storm event be to this process?

MR. PROPER: Initially, I would think it would stop the actual construction process. The vessel would have to go to sheltered water to stand by for whatever period of time the weather is poor.

Beyond that, I would say that perhaps it could impact the amount of spoil that remained alongside the trench. So it may increase the amount of backfill that would be necessary, and I think those are the two main impacts.

Yes, sir.

AUDIENCE PARTICIPANT: What do you mean by jump into Georges Island?

MR. PROPER: As we're plowing along, pulling the plow, when we get to the north side of Georges Island, that's where we intend to drill under that area. So we stop there, move to the

other side and continue onto the side or in reverse,
going south.

AUDIENCE PARTICIPANT: No portion of the
pipe will be above the surface of the ground?

MR. PROPER: The only places where we
may have, and we are just now going through the
process of identifying exactly what the condition
are of the four utilities that exist in the area,
the various water lines, the sewer lines, things of
that nature.

Depending on how deep they are buried
now, we may have to come up and over them in order
to effectively cross. Ideally, we hope that they
are down deep enough so that will be minimal, but we
don't know.

AUDIENCE PARTICIPANT: Is it anticipated
that eventually there may be some portions that
would be above the surface of the seabed?

MR. PROPER: I think we can assume there
will be some. I don't think there is going -- I
don't think the existing utilities are going to be
buried deep enough by and large. We would like to
have a foot and a half separation between each
utility and ours in what we are proposing to and

which is somewhat difficult in other areas. So that when our roughly 30-inch or 36-inch overall diameter crosses over, and plus some protection over the top of that, it's going to be above, yeah --

AUDIENCE PARTICIPANT: Now, the portions that might be on the surface of the seabed, would they be lying on a cradle, or would they face underneath it, or would they be flush with the surface of the seabed?

MR. PROPER: The seabed would be built up to support them. If they, for instance, had to go up and over an existing pipe, that distance from where it actually crosses, back where that pipe, our pipe, touches down would be supported by a concrete mattress or something of that nature in order to provide full support across that bridge.

AUDIENCE PARTICIPANT: What I'm getting is we are thinking of the lobster migration.

Is there going to be any significant permanent impediment to that migration, or are we talking about little ones?

MR. PROPER: We are talking about several hundred feet at each crossing, and then we would be back underground from that point.

MR. TYRRELL: That is like seven crossings.

MR. PROPER: Yeah, about seven, roughly seven crossings.

AUDIENCE PARTICIPANT: There is not going to be any permanent significant barrier for any great length?

MR. PROPER: No, sir. It would be several hundred feet maximum. As I mentioned, the other place where there might be some surface lay, we found we are going to pretty great lengths to try to identify where the bedrock is that comes within the 13 feet of the bottom so that we can go out ahead of time and clear that bedrock so that we can get the pipe down to either 10 feet or three feet of cover. If we, for some reason, missed a point, then we would have -- we would have to hump that bedrock area maybe a bit higher than any of the three feet, but our intent obviously is to try to find those areas ahead of time and clear them.

Yes, sir.

AUDIENCE PARTICIPANT: Is there already a foregone conclusion that the pipe will be run through the water?

MR. PROPER: That it will be run through
the water?

AUDIENCE PARTICIPANT: The coastal --
(inaudible.)

MR. PROPER: I think it is, yes.

Yes, sir.

AUDIENCE PARTICIPANT: Is the sewage
outfall that comes from Deer Island out, and it's a
very sizeable outfall, and it's not buried. I
believe it's three quarters above the sea floor.

How are you going to go over that?

AUDIENCE PARTICIPANT: Could you repeat
the question.

MR. PROPER: Yes, I will. The main
outfall from Deer Island that runs out to the system
now in the bay is that the one you're referring to?

AUDIENCE PARTICIPANT: Yeah, it's like
12 feet.

MR. PROPER: It's significantly
underground.

AUDIENCE PARTICIPANT: Oh, it is?

MR. PROPER: It's a couple hundred feet
under the sea bay.

AUDIENCE PARTICIPANT: I think she is

talking the diffuser.

AUDIENCE PARTICIPANT: I believe it is not buried.

AUDIENCE PARTICIPANT: The diffuser is not buried.

MR. PROPER: The diffuser is on the surface of the bay, the sea floor, but the tunnel itself is several hundred -- several hundred feet underground. So we will be crossing it. In the area where we cross it, it will be 300 feet between our pipe and the top of that tunnel. Or 400 feet, whatever the depth is.

MR. TYRRELL: The tunnel was bored through bedrock. It starts about 400 feet down on Deer Island and slopes up to about 200 feet under the sea floor at the diffuser. And there are vertical casts that come up out of the sea floor that make the diffuser. So there is like 200 feet -- around 200 feet of bedrock above this tunnel, and we are only going to go down like ten feet.

MR. PROPER: And we are several miles away from the beaches.

AUDIENCE PARTICIPANT: The person before

that asked the question about alternatives, actually that is the question that I came with here. Most of your pipeline is over land, and then there is this portion that plows itself through Boston Harbor, and I'm just really curious why you are not continuing your pipeline through land.

Why are you insisting on going on through Boston Harbor? And I think as part of the EIS process you are supposed to look at alternatives.

MR. BONSALE: What I might suggest -- I can spend about five minutes talking about the alternative processes that we went through. Maybe if we can get through more of the construction, and then those kind of nonconstruction specific questions, we can come back to at that point, if that is all right.

AUDIENCE PARTICIPANT: I'm curious as to what the criteria you used as far as depth of the pipeline, what it should be. What determined that factor, as opposed to the 15 feet, 10 feet?

MR. PROPER: The initial assumption was that those were numbers that had been used historically for burial of pipelines. The three

feet is a traditional number in the Gulf of Mexico; for instance, not just the Gulf of Mexico, but the Continental shelf of the U.S. has dictated in the past that there is just three feet of cover on top of any pipeline within 200 feet of water there. So 200 feet or less is buried three feet. That was our initial assumption on the entire process, that we would bury it three feet.

Then as we got into the anchorage issues, we went to 10 feet, because that is a bit more of a typical Corps of Engineers' channel depth. We have seen that in different places. We have also just seen historically a ten foot cover requirement being typical. So we went ahead, and we picked those two numbers.

Now, what we are doing is we are evaluating what type of cover material is necessary in order to ensure that those depths are adequate for the types of anchoring that we can anticipate along the route.

The clear defined anchorage areas, we have gone ahead and assumed that 10 feet was the right number, and we are evaluating now to determine whether the existing soil that we would refill the

ditch with is sufficient to protect the pipeline, or
do we need to have some additional material going in
there to provide support over the pipe?

AUDIENCE PARTICIPANT: What about the
theory to determine depth?

MR. PROPER: To determine the --

AUDIENCE PARTICIPANT: If that is going
to be an adequate depth?

MR. PROPER: We're trying to develop
some studies that would test anchor drop penetration
of that drop through the native soil for all the
different parts of the -- and try to prove that what
depth penetration might be for reinstalled soil, not
necessarily in its his native condition, but in a
softer mode, refill it and so forth, what the
requirements will have to be. There is some history
through the Navy and others. There are some studies
that have been done with anchor dropping soil
compaction and that sort of thing.

MODERATOR ROSENBERG: Ladies and
gentlemen, hold the questions for a little while.

You, please finish up.

Thank you.

MR. PROPER: The areas of 20 feet or

less, where we are going to pretrench the ditch prior to pipeline, we will be utilizing a conventional bucket dredge, very similar typical to the typical bucket dredge you have seen in operation in this area. Again, that trench is going to be about 10 feet deep -- excuse me -- about eight feet deep initially, so that once the pipe lays in it, we can backfill over the top and achieve about three feet of cover.

I mentioned the crossing earlier. At each point where we would cross an existing utility, we would use some sort of a spacer, a protected layer, most commonly used as a layer of concrete blocks that are pieced together and laid over the top of the pipe. And, typically, two of those mattresses are laid over the top of the existing pipeline prior to laying ours over the top of that, which gives us about a foot and a half separation.

We'll have several additional vessels that will be used in support of the project. One is the pipe haul vessels; and while this isn't a good picture of a pipe haul barge, it does give you an idea about what the pipe itself looks like. You can see here the steel pipe surrounded by a layer of

concrete coating over the top. You can see this cut back area. This light green material is the corrosion coating that is applied to the pipe to protect it over the course of its life.

There are also other protective means added to the pipe to protect it to keep it from corroding over its life.

Both in the beginning and towards the end of the project, diving support will be required. In the beginning of the project it will help to protect those crossings that we are going to be laying over the top of. Those are existing utilities. And towards the end of the project to make the final connections of the different pieces of the pipeline as it was laid on the bottom.

There will be directional drills. There will be three of them that go land to water and two that go water to water. The land to water setup, the rig is on land, drills under the beach and comes up offshore in an excavated area that ties in subsequently to the pipeline that is laid on -- on the bottom.

Looking at it here, Deer Island, we will drill from the land out to a point in this area, and

from that point we will start laying the pipeline out towards the main line.

On the water-to-water drills, which would occur here at Georges Island, it was set up on one side in the water, drilled to the other side in the water. And also up here, within Beverly Harbor, that route, HDD, in this area.

The drill rig itself would be set up on a jack up or perhaps a moored vessel to give it support so that as we drill, we drill under that particular area; in one case under Georges Island; in the other case in Beverly, we are just trying to avoid some sensitive material, with some sensitive areas of eelgrass. We're trying to drill about roughly 3,000 feet in that area.

Just to give you some idea about what it would look like on a water-to-water drill. This is a drill that was done down in Alabama where the drill rig was set up on this side, drilled under this island, and then came up on the other side near where this other support vessel is located. This gives you some idea about what that might look like.

Realizing that the scale is kind of small, but I will try to describe for you what we

have here. The project will take roughly, what is that, one, two, three, four, five, six, seven, eight, nine months in total. What we have done is we have laid out our project such that the major construction, that being the pipe lay and the pipe burial activities and backfilling activities occur primarily in the November through April time frame. We propose to the various agencies and regulatory bodies that we begin the horizontal directional drilling operations in September, such that because they are fairly well confined in some of the near-shore areas, with that idea being that we're not active out here in the main bay until roughly November. We do plan to do a little bit of prework.

I mentioned earlier there are some areas where we are going to have to clear bedrock. We would do that ahead of time, like blasting the trench through that particular area. Generally, those areas are several hundred feet long. I don't think we have any that are more than about 500 feet long. So in short there are three areas along the route. We would also do a little bit of diving work in preparation for crossing over those foreign utilities there in the early -- in the October time

frame; begin the basic construction work in November, with the laying of the pipeline; and as I mentioned earlier, once we get a little bit down the road with the laying, we will start in with the plowing operation, and then probably this lay barge would become the jet barge in order to get maximum use of the equipment that is in the area.

And then once the plowing is complete, we can stop -- start some of the backfill work in those areas that are not being jetted. I mentioned earlier about 50 percent of the line is buried to 10 feet. That is the area that is going to be jetted. So the other half of the line we can start backfilling as soon as the plowing operation was complete.

All of these durations exclude any weather down time. We are anticipating there is some amount of down time. We have added that on just to kind of let everyone know we are thinking about that and know that has to be included into the process.

Once we are through with the major construction work, we go back to some of the minor work I mentioned earlier with that diving support

vessel. We are going to do our final ties in and the final hydrostatic testing of the pipeline.

Just a couple of comments about some things that have gone on in the course of the project. The route selection we started up here in our initial idea was that we would go as most pipeline routes start out. You know, ideally, you have a straight line. It would be the shortest and quickest, but as we headed offshore, we headed down directly towards Weymouth and found that there were a number of reasons why we needed to reroute the pipeline.

One was there was near shore areas, near shore habitat, as well as some hard bottom areas that needed to be avoided, so we went further offshore than we originally planned to go. As you see, we have various curves and wrinkles along the pipeline, and the idea there is to avoid as much of the hard bottom areas as we possibly could for two reasons, at least two reasons. One, that's some prime habitat. And, also, it's a more difficult area to construct in. So it was mutual benefit to be going and avoid as much of that hard bottom as we could.

The next thing we did is we committed to the plowing process from availability and from a construction convenience prospect. It was easier to jet the pipeline than plow it. But we also know that the plowing is a bit less of an impact than jetting so we committed to using plowing early on.

The other thing we committed to do was to utilize the horizontal directional drilling process so we didn't approach the beach with the traditional dredged cut and cover approach. We decided to move with this directional drilling, which is a significantly more expensive process, but nonetheless, a lot less intrusive on the near shore habitat and the beach habitat. That was another step that we took. Right now, we are working with HDD contractors around the country to be sure that there is enough equipment to satisfy the requirements for doing the work within the time frame that we looked at earlier. We started negotiating with one of the contractors in order to try to get someone on above board as soon as possible. We see that as a critical element and the ability to complete the work within that time frame that I was showing a little bit earlier.

The other thing I just wanted to point out is the equipment that I was showing you is somewhat generic to the industry. No one contractor has all the equipment that we showed you here today, although they all do have a jet. They do have a plow. They do have a lay barge. So we're fairly confident of getting a contractor on board that can do the work that needs to be done in the time frame that we pointed out to you.

I think that is it. It is.

MODERATOR ROSENBERG: Okay.

AUDIENCE PARTICIPANT: I have a question. What is the average life span of the pipeline?

MR. PROPER: We say the design life is 40 years. Practically speaking, it's much longer than that. In particular, with the corrosion coating both internally and externally in the pipeline, we think it can last a lot longer.

MODERATOR ROSENBERG: Okay. If you would hold your question for about five minutes, please.

I was kind of hoping that we would have those questions identified with the individuals that

asked them. We are having a public record here. So a little later on if you can you just come up and write your question down, your name that you asked earlier, maybe we can get that into the record by name.

There has been some other questions asked. Some of that will be decided by the Corps' permitting process. I heard a question with regard to the least environmental damaging practical alternative. That is what the EIS is all about, and I have heard something about dredging windows, environmental windows, that there may be conditions of any permit, and questions can be addressed to Ted with regards to permitting questions.

Now, ladies and gentlemen, the meeting tonight, as you can see, will be conducted in a manner that all who want to express themselves will be given that opportunity.

To preserve that right, I ask that there be no interruptions, and I don't see that.

If you wish to raise a question on an issue, please do it.

There is not going to be any cross-examination by anybody from the permit

applicant or the Corps of Engineers. This is your opportunity.

When you came in, copies of the public notice and the Corps of Engineers' regulatory jurisdictions were available. If you did not get a copy, please pick it up. I'm not going to read the public notice, but it will be entered into the minutes of this meeting.

A transcript is going to be made to assure a detailed review by the Corps of Engineers on all those comments. A copy of the transcript will be available in the Concord office for your review. We are also going to put a copy of the transcript up on the web in about three and a half or four weeks; or you can make arrangements with the stenographer for a copy at your cost.

Now, we have some individuals, eight individuals that have requested to make a statement. When you make the statement, please come forward to one of the microphones, identify yourselves, and to speak for a position of any organization. If you are speaking for yourself, that's fine.

Once again, there has been no decision by the Army Corps of Engineers on this permit, and

there will be no decision made tonight. Our final decision regarding the permit application will be based on the evaluation of the probable impacts of the proposed activities, and your comments will be considered in our evaluation. Accordingly, please bring up any comments or topics you feel that need to be discussed in that evaluation.

Okay. Our first speaker will be Paul White, and he will be followed by Polly Bradley.

Paul.

PAUL WHITE: Hi. My name is Paul White, and I am from the Peabody Pipeline Coalition. We have been following this pipeline for approximately a little over two years, and mostly on the land route, but we have been following it also on the ocean route, because the land route and the ocean route have been filed simultaneously.

The first filing officially came in October of the year 2000, but Maritimes has held meetings before that, neighborhood meetings, regional meetings on the land route, and now it is now since the filing. The Army Corps of Engineers are now doing the same thing. So I have a few things to bring before you, and it all basically has

to do with what we found out and what is working on the ocean for you.

First of all, Maritimes has been very responsive to us on the environment issues. We have got 100 percent on everything we requested through FERC, or requested directly to Maritimes, in response to anything. So please, if you do have something that is a question, make sure you bring it to someone's attention, because they do respond. And in doing so, we think we have in the urban area, which we were looking at, which was the edge of Middleton, Peabody and Salem. We think we have done very well and kept it out of the tending area, kept it out of the neighborhoods, and protected the environmental issues.

One thing that I noticed in this that you now are mentioning 10 feet on the -- on the burying of the pipeline, but the US Coast Guard back in August of this year said that on anchorage 5, off of Boston Harbor, that you were only burying three feet, and they criticized you, because the anchorage of a large ship went down six feet.

When did you decide to switch to 10 feet for the length of the pipe in the water?

And why didn't the U.S. Coast Guard know about this?

MR. TYRRELL: Mike Tyrrell.

We, as Leon talked about earlier, initially we went to three feet of cover as the initial DOT design. Early on, Coastal Zone Management, as well as our meetings with the port operators group, the pilots association, and the Coast Guard have brought the issues that we just talked about up here in Salem, Broad Sound, the precautionary area and down to anchorage 5. Due to constant dialogue with those agencies, that is where the deeper burial issues came up. The Coast Guard letter that was issued to FERC, unfortunately we had meetings just after that letter that they raised their concerns to us. So essentially through our last group meeting that is currently where we stand with the deeper burial.

PAUL WHITE: And that's what I mean part of the issues, if you respond to them that you respond, too.

Also, if you have any issues of safety. We have found that you have to deal with the Department of Transportation, that most of the

safety issues go through the Department of Transportation. They will be heard, but the Department of Transportation makes any safety issues.

When the -- when the pipeline first enters the Danvers River in Danversport, the Danvers River is planned to be dredged by the Army Corps of Engineers in the near future, the next couple of years.

Do you see this pipeline coming out of the dredging that you worked with the Town of Danvers, or any of the dredging to make sure they are still buried?

And, also, the other thing is we commented on the -- on the Salem Harbor 2000 Project -- the Salem Sound 2000. Burt said they postponed it for ten years. That's fine, but this pipeline is going to be there for 40 years. They are going to be dredging Salem Harbor, and it looks as though this pipeline will be sitting on top of the harbor. If they continue with this dredging project in ten years from now, we are concerned with the future of this pipeline, not with the present, but those are two issues that they can address

later.

Just to let you know, this is the first project in the ocean around here for pipelines.

There are three more proposed.

Back in, I believe, September, Tenneco which is the structure that we have around here right now, proposed a Deep Blue Project, which is going down from Sable Island all the way down to New Jersey. Maritimes and Northeast is currently looking at an all-ocean route, too, for another one to connect down further.

And we just learned -- we attended a lecture given by Premier McCann of Nova Scotia about this whole pipeline project last Wednesday at the Chamber of Commerce, and he also mentioned another project that is coming up called Neptune, which is one from Sable Island to Boston Harbor. So we have another project coming down by ocean. To let you know, I'm not sure when, but it is proposed right now.

I have a couple of things to show you here. This is the present structure of pipelines through New England right now. Okay. There is nothing in the ocean, as you can see. It's all

presently in the ocean -- on land.

The present use of the different pipelines and what it is used for presents a factor bottom line that if this pipeline doesn't come through, we will be out of gas by the year 2005. This pipeline must come through. It's just a question of where it's going and when it is coming. We have no choice. And the reason why it's coming through is because of the 24 power plants that are being built by gas-generated systems. It's not residents that affected this. We have an 18 percent increase in gas-generated power plants that are going to be using this gas. The EPA data is advantageous to fire up with gas, and because of this, the superstructure -- the infrastructure in New England is needed to bring additional gas into the south and in from the north. And I pointed to Doctor Ham, Peter Ham's lecture on Wednesday. Now, it looks like they may have a 200-year supply of gas off of Sable Island.

Besides this gas -- this gas pipeline being protected by a coating, it's also protected by a cathode electrode, which puts a charge in the opposite direction so that erosion won't take place

in the pipeline. It's pretty good. It's the best one due to this erosion process.

And one thing to our advantage right now, unfortunately, the article that came out on SWIM is the NEPCo. project, the Salem Power Plant, which is the dirty coal being used in the Salem project. I have in a boat in Beverly Harbor at the Jubilee Yacht Club for 12 years. Whenever they do the smoke stack, I have to clean my boat. But, unfortunately, folks with this, if we bring this gas too fast in Salem, number one, there won't be any gas to convert it, because basically this gas is mostly spoken for. If we do convert before 2005, you'll see brownouts in the North Shore. Right now, by burning with coal, we are probably the only ones not susceptible to brownouts in New England, because of the build up of power plants in New England.

I just want to give a basic background of why this is coming, what they have done, and how we have been involved in the last two years in this project.

And I have a question for the Army Corps of Engineers. Now that you have on the HubLine, are you proposing anything for the Phase III pipeline?

Thank you.

MODERATOR ROSENBERG: Needless, to say the Army Corps of Engineers is not proposing anything. Our coverage here are Section 10 rivers and harbors and Section 404, the Clean Water Act.

I appreciate your overview of the project so far.

Do you want to say one thing before we...

MR. TYRRELL: I appreciate your comments. On the two things, first of all Maritimes is not proposing any other offshore project, other than the one you see here. It's the Maritimes Phase III plus the HubLine. There is some activity in Maine with compression, but that is all. There are no Maritimes; or even for that matter, energy offshore pipelines that are being proposed.

I appreciate your comments about the -- about the future dredging projects in the Danvers area and in Salem. As well, we don't want to have to be involved in moving a pipeline that has been established. So we are coordinating very closely with both the Corps' navigation branch, as well as the local authorities to make sure that we

are not within that proposed dredging footprint. So again, it's a safety design that we are concerned with as well.

MR. BONSALL: Just one other, Paul raised a couple of other, or as Mike said, Maritimes does not have everything. El Paso has a feasibility study going on now about an offshore pipeline that is coming to Stable Island. That is still in the feasibility stage.

And Neptune is an electric transmission project. It's not even a gas project. It has been nicknamed Gas by Wire, but it's a direct current, approximately 4,000 something or other. I can't remember what the 4,000 is. And that is going to be in open seas in terms of marketing. That is not a gas pipeline.

MODERATOR ROSENBERG: Fair enough. I am sure we are going to be talking about that when and if that ever comes up under Section 404.

Our next speaker is Polly Bradley. She will be followed by Joseph Ayers.

POLLY BRADLEY: Thank you very much. I want to thank the Corps of Engineers for setting this up, and the town for literally setting it all

up and the -- the energy people for coming, and for all of you for coming to this.

I have got a written comment, which is fairly long so I am just going to make a quick summary and let other people speak, who haven't had the opportunity to make written comments. I do want to say though that I was told that the written comment period will be open for another two weeks. So if you do want to make written comment, you can. And the address is right here on my piece of paper, which you have seen.

One of the things that I noticed in this presentation is that it was all about the engineering and nothing about the biology, and it's the biology that's our concern primarily.

The engineering will affect the biology, but they haven't said why and how. They said why. That's perfectly clear when you see it, but how is the question.

Just four major points. One is protect the lobsters, and Joe Ayers from Northeastern is going to say a lot more about this so I'm not going to say much.

One request. SWIM requests that

Algonquin convene a meeting of the lobster experts.

In other words, the scientists and the lobstermen to discuss and determine the safest way to build this pipeline.

You know, if you were to dig in farmer's fields, would you certainly ask their permission, and would you pay them for it, and you would tell them about it, but our lobstermen have not been -- have not had much at all to say about this. And so we're very glad you pulled a meeting together. But I would ask that our lobstermen, all the local lobstermen up and down the coast, be informed exactly when and where this work is going to be done so you can plan your work accordingly.

The South Essex Ocean Sanctuary off of Marblehead and Salem, we are particularly concerned about that. According to the Ocean Sanctuaries Act, it has special protection, and we would like a comprehensive monitoring and mapping program particularly in that area, but in general so that we will know what is going on.

And as far as cleaning up the area is concerned, I would like to see this gas used in the power plants.

I have got a grandson, who is six years old, and when the Clean Air Act was written, and these old power plants were grandfathered in, my daughter was two years old, and I don't want to go another generation before it's cleaned up. And I -- I do talk about this, and I resent this being called grandfathering. It's a bit of an insult to us grandparents. But I urge you and urge the energy companies and Salem Power Plant, all the rest of them, to clean up and use this gas.

The other comment that I have is on the process. It seems like it has been very fragmented, and even the EPA in their permits, and the federal EPA and the Massachusetts Environmental Policy people commented that it would have been better to have the -- a joint project. Some of them have a joint report and statement on the environment. I certainly would like to have seen this.

Sometimes they created an advisory group that is just the engineers, the agencies and the citizens groups, the environmental groups, and they sort of cross fertilize their minds, and in this they seem to talk to many others separately; and on the local level, it certainly was very separate from

anything else with the Conservation Commission. So

I -- so I would like to have seen more unity there.

And I guess that's all I have to say
except thank you again, all of you for coming here,
and I just want to have this project safe and energy
safe.

(Applause.)

MODERATOR ROSENBERG: Joseph Ayers
followed by Carol Shutzer.

JOSEPH AYERS: Okay. My name is Joseph
Ayers, and I am the chairman of the Law Conservation
Commission, and I am also a professor of biology at
Northeastern University, and I have been studying
lobster behavior and versatility for about 30 years.

My major concern about this project is
that this trench, as you have described it, and
especially the 13 inch deep trench, which will be
open for a period of time is basically a trap for
lobsters. Anything that goes into that is not going
to get out, and I can guarantee that. I have done
research on how lobsters get over contoured bottoms.

The aspect ratio you show in your
diagrams are just improper. If this were open in
May, when the offshore migration of lobsters was

hurried, it might take out most of the population in this area. So that is, I think, my primary concern here, and I am very concerned about potential for disruption, a catastrophic storm, imagine the '91 event, if that occurred in January, for example, and that disrupted your construction schedule, put you off schedule so that these ditches were open in May, I think the potential there is profound.

Have you done any study on the movements of lobsters and what governs the movements of lobsters with regard to bottom features?

You are going to be changing the bottom topology. Any elevation of the bottom is going to have an impact on the movements of the animals, and especially the way they make decisions about where they go.

If we have the 30 foot wide band of materials stretching from the north of Boston Harbor to the bottom of Boston Harbor, this may not seem like a big feature to you, but to a two or three centimeter lobster that is moving around on the bottom that is trying to hide from predators, it could put them at tremendous exposure. So I think when this material is capped, I think it absolutely

needs to be capped with material that is going to be -- provide the animal some sort of refugia, and I would really propose that cobble be considered as the capping material for the ditch after it's put in.

Let's see. The last thing that I was very concerned about in your presentation is there was a lot of talk about the bidding process and contractors. Having been involved in a lot of projects where the lowest bidder was chosen, I know there are compromises that are made here, and I sort of would assume that the more environmental friendly that the project is going to be, the higher the bid. So I want to know how you're going to weigh environmental friendliness and the way it is actually implemented and put on the bottom versus the bid that is taken back to perform the project.

Lastly, is there any plan here for long-term monitoring of the beneficiary of the lobsters with regard to the impacts of this process?

And is there any plan for mitigation if an impact is observed?

(Applause.)

MODERATOR ROSENBERG: Would you like to

respond?

MR. GEOGHEGAN: I am Paul Geoghegan from Normandeau Associates. We are an environmental consultant to this project. I would like to address some of the questions I just heard from this gentleman. I'm sorry. I forgot your name.

JOSEPH AYERS: Joseph Ayers.

MR. GEOGHEGAN: Joseph Ayers and also Ms. Bradley. The project is concerned with lobsters and also concerned with lots of things. I think the key feature here, as far as environmental aspects goes, is the construction window for the heavy offshore construction, which is November through April. I recognize that the November side and the April side, we're nibbling on the edges of the lobster movement, but the plan is for most of the heavy construction to occur in the winter when the movement of lobsters should be at its least.

Second -- or I don't know. I'm just going to keep talking. But, Leon, I am not sure you were able to see in his schedule, but there is six weeks of weather time built into almost every aspect of the construction schedule. So we have taken into account storms.

Another item, I know we have at least one member of the MLA here. That's the Massachusetts Lobstermen's Association. We have been meeting with them regularly, and that November to April time frame that you see there was developed in conjunction with the EIS. We didn't come up with that by ourselves. Frankly, from a pure engineering point of view, they would rather construct in the summer, but we're going to a winter construction period to minimize the impact on the lobstermen and lobsters.

Regarding the migration of movement of lobsters, I think, in my mind, and maybe we could have a nice discussion about this afterwards. I would define it more as a movement, rather than a migration. For me a migration is what you see of the Pacific salmon in the Northwest where they all get up and go.

What I see here with lobster movement is a generalized movement in the winter of lobsters from the inshore waters when things get cold, the water temperature gets a little too cold for them. There is a movement offshore. Not every lobster inside this pipeline is going to cross this

pipeline. And, again, I can't emphasize enough that we are constructing in the period when the movement should be at its least.

Finally, the capping of the pipeline.

The intent of the project is to put things back the way we found them, and that is with the back plow to put back the native sediment that was there. We have talked a lot about putting cobble there. That was a great habitat for the early benzoic phase lobsters. To be honest with you folks, every time we go to a meeting, either you people, we have someone else who wants us to do something different, and there is a movement not to cap it with cobble, because that's soft substance, and that has a purpose also.

Personally, I would rather cap it with cobble, because that is more of a living habitat, but you have to recognize that there are many different aspects of this project pulling from many different directions.

I'll wrap it up.

MODERATOR ROSENBERG: Thank you. I would just like to, before you go on, I would just like to remind you you people are the people that we

are here to serve so please answer their questions and address them with a respect that you would deserve, and I think that everybody is.

Okay. Please, go ahead.

MR. TYRRELL: The only other point with reference to monitoring and mitigation, we have been in a great deal of discussion with both the National Fisheries Service, Division of Fisheries, the Corp, CZM. Several of these, we have had many meetings -- they have been involved in those meetings as well. We had a draft monitoring plan in place that we will be putting into a Final Environmental Impact Report that goes through what we plan to do, both what we are doing currently and what we plan to do prior to construction and what our plans are to do post construction. So that will all be laid out in detail. It includes both running ROV surveys, doing spy surveys, capping surveys, as well as several other surveys, things of that nature. So there is a great deal of discussion going on specifically with reference to monitoring and mitigation, and we can talk all night on those issues, but before we discuss the EIR when it comes up.

MODERATOR ROSENBERG: That's great.

Thank you.

Carole Shutzer, who will be followed by
John Benson.

Carole.

CAROLE SHUTZER: My name is Carol
Shutzer. I am the Chairman of the Board of
Selectmen in Swampscott. We have listened a lot
this evening. We have a lot of specialists here.
We have biologists and college professors. We have
specialists in energy. I'm just here myself
representing the residents of Swampscott. I don't
know about FEMA and MEMA and FERC and MERC and all
these names.

(Laughter.)

I'm sure you all know them all, but a
lot of us here don't. We have an active fishing and
lobstering industry in Swampscott. Needless to say,
it reflects the livelihood of some of our residents,
and we are concerned about that. It seems that
you're concerned about it, too, and I'm really happy
to hear that.

I just want you to understand the
seriousness of that nature, that we can't just let

all this go by and take no stand on it, but we are interested, and we are concerned and we are watching, and we certainly want to make sure that everything is done to minimize. I know someone talked about what are -- what mitigating issues are you going to address, what are you going to adopt to make this less of an issue in terms of lobstering. Some of them I know were spoken about tonight, but we would like to see your final copies and understand exactly how you are going to mitigate all the issues in terms of lobstering and the industry there.

I attended a meeting similar to this two to three years ago. I'm not sure it was the exact company. I believe it is the same pipeline issue, and I do think that at that time there was a discussion about the pipeline being much closer to the land, and you have addressed some of those issues. You didn't tonight say -- I would be interested to know -- how far offshore in general and specifically to my Town of Swampscott is that pipeline planned to be. There were no numbers really given there.

Is that something that, you know,

everyone is going to have in clear view?

Is it something so far away that we are not going to be able to see what is going on?

What is the distance on that?

And the other thing I would comment on that I'm concerned about is clearly there are a lot of people here interested in clean air. We have a problem already in Salem in terms of the environment and energy. And I'm not sure where you fall into this, or the Army Corps of Engineers falls into this, but I'm concerned that we have a pipeline put in off our shore, and the energy goes someplace else. Whatever the environmental impact is and concerns for our industry, et cetera, that the energy be used in the area here so that our environment can be cleaned up, not so that some other power plant someplace else in the country are pumping out nice clean energy, and we instead are still breathing a lot of dirty air from coal-burning plants. So wherever that goes, I would appreciate making sure that people understand that we are interested in a clean environment here and that energy that is off our shore be used for our residents.

Thank you.

(Applause.)

MR. PROPER: Just with respect to the distance offshore, from the nearest point here in Nahant, we are probably about two and a half miles offshore; and then from Swampscott, I guess that is about three to four miles, something in that range.

Also, if I could follow-up. A minute ago, there was a question about the contractors and bidding and environmental issues perhaps suffering due to cost considerations. All that you see us presenting, all of the commitments we are making with respect to how the project is to be constructed, with respect to schedule, with respect to environmental issues that we made limits to, and it will be part of the permits that we receive for the project will be requirements of the contracts that we have with the contractors. So any commitments or any permit requirements that we are working under will certainly be a part of that. We are communicating to the contractors now that perhaps one of the more important aspects of the plan is to perform the work during the time period that we described to you.

Typically, we might see a contractor proposed to take a bit longer to do it for less money. Our intent is to communicate that to the contractors. We are most interested in completing the work within the time period, not necessarily in the lowest price. So that type of information is being communicated to them, and we intend to abide by the requirements of our permits, as well as the other commitments we have made along the way.

MR. BONSALE: The last speaker talked in terms of keeping some of the gas on the North Shore. I think you can see in the filing we are going to make in a couple of weeks that, in fact, a significant amount of this gas is coming from Salem, in fact, will be staying here on the North Shore.

But one of the things that is a recurrent theme is the PGA Salem Harbor facility. We, in fact, are relatively close to that facility in terms of where the pipeline route is going to be going, the Salem Harbor area and Beverly areas. Early on, we had meetings, for example, before the City Council in Salem. There was a lot of interest that PG and E, in fact, would be one of the customers of this project. We are fully prepared to

talk with them if, in fact, they decide they want to buy gas. The reality is they are a customer, and they made it very clear publicly that they are not at this time in a position where they, in fact, want to convert their plant or, in fact, buy gas from us. We are here. We'll have a pipeline in the area, and clearly if their position changes they can talk with us, but that is a business decision that they have to make. They have said that they see that sometime in the future with gas in the area increases their options, but there is no way we can force them to go on. Again, it will be a significant gas supply close to that facility. That is a PG & E decision. It's not one that Maritimes get will involved in.

MODERATOR ROSENBERG: Thank you.

The next speaker is John Benson, and he will be followed by Lynn Nadeau.

John.

JOHN BENSON: Thank you. My name is John I. Benson, and I'm on the open space committee in the Town of Nahant.

And I asked one of the questions earlier namely what portion of the pipe would be above the surface of the sea floor, and whether or not it

would be flush with the sea floor for a cradle. And that question was dealt with.

I had other questions, some of which have already been dealt with by Joe Ayers and Polly Bradley. I'll just run through very briefly a list of comments.

It was mentioned that there may be -- in the process of digging the trench, there may be a need to supply additional fill. There might not be enough fill left over from the excavation, and I just wanted to make sure that any additional fill that was brought in from the outside was environmentally appropriate. I'm -- in the back of my mind is hearing that we had here about three years ago with the Corps of Engineers when they proposed to build a trench about a mile off East Point into which they were going to deposit the spoilage from dredging from Chelsea Creek. And we were very, very concerned about that. We just -- we wanted to make sure that any additional fill -- we want to know where it's coming from and that it will be of the appropriate type.

Another comment. Is there -- if there is a break in the system, if there is a puncture or

an explosion, or something in the pipe itself, are there any mechanisms for sealing it in an emergency?

All of us who live in the town every time we cross the causeway and look at the big gas tank, and we wonder what is going to happen if it springs a leak, and you got a plume coming over the town, and we are all, I think, concerned about any time there is a storage or a movement of gas.

If there is a leak is there -- are there immediate means of detecting that leak and then securing it?

Another comment, which is related to that is there are two types of extreme emergencies that might cause a breakage in the pipe. One, of course, in light of what happened last September, and the other concern of mine is that this is a long time in my memory, it has been about 40 years since we have had an earthquake here, and I believe we have a major fault or a geological fault running through the traffic circle, in that vicinity, at the end of the causeway, and I would hope that planning for earth -- major earth movements like that would be taken into consideration in the construction of the pipeline.

And the other major comment I had was on the disruption of the lobster migration patterns. I wondered whether this project -- if it was mentioned that the entire span of the trench, the entire pass be made and that another entire pass would be made, and I wondered whether that could be done incrementally rather than all in one pass.

Finally, I would like to thank everybody who has spoken so far. This town has never been in opposition to projects that have been proposed, accept for that spoils trench, but we would like to see a project, a good project work, and what we are most concerned about is ongoing honest, frank communications. The idea being to see if we can make a good project work.

Thank you.

(Applause.)

MODERATOR ROSENBERG: Thank you. I remember the conversations personally.

Our next speaker, Lynn Nadeau, will not be speaking.

Jane Bright will be our next speaker, and she will be followed by William Crawford. Okay.

JANE BRIGHT: Thank you. I am Jane

Bright. I am here to talk on behalf of Health Link, which is a grassroots organization that has worked to get the Salem Power Plant cleaned up.

Let me start with the Salem Power Plant.

First, as you may know, following the clean air issues, the meeting the company had only the end of this month to announce what it is going to do to the new clean air regulations that were implemented last spring.

Were they to convert to natural gas, they would have until 2006 to make that happen. Given the time I saw on the pipeline, that is very doable. Historically, they told us that the reason they wouldn't convert to gas, there wasn't any gas to convert to. You know, they said, well, it's not going to become feasible; however, their other plant which is Brayton Point, which is in Southeastern Massachusetts, from which we are downwind is the largest coal burning power plant and the filthiest power plant in all of New England. They have a small gas pipeline that goes into that plant. Gas is now so reasonable in price they are burning gas right along with coal.

I commit to you that no matter what PG &

E says, they are doing even less damage shutting down and converting to gas. I am hoping we can pressure them to clean that plant up to the maximum, to use gas, which obviously we can't do with the gas lines there.

So Health Link does support the responsive siting of the gas pipeline, and we do not have the expertise to assess the engineering that we saw tonight and the marine issues so we will defer to those experts and assume that each site can be done.

But I would like to say a few words about the fishing industry issue, which is a major issue here. As I mentioned, over 24 years over that time I have watched the fishing fleet dwindle year after year, and I'm very sensitive to the issues being raised by the lobstermen people.

I would, however, like to remind people that there is a huge threat, a much bigger threat to the fishing industry than this gas pipeline, and that is mercury that is contained in coal that is burned not only at the Salem plant, but at the Brayton plant, and about 50 percent of our energy supply comes from coal.

Coal contains mercury. The EPA has estimated the Salem erupting 100 pounds of mercury a year, which gets into the air and ultimately into our water supplies, about a teaspoon. That is right, a teaspoon is enough to contaminate fish in a 25-acre lake.

What does that contamination do? For women, who are pregnant and small children, it causes brain damage in fetuses and in young children. Women of child bearing age, fishermen are not supposed to be eating swordfish, or tuna, or tamale of lobsters, because it causes brain damage. Adults can get severe neurological problems when you eat too much mercury as well. When you stop eating all contaminated foods, it takes at least a year for it to come out of your body.

We need to find energy alternatives that do not put all the toxins into the air like mercury, which is contaminating our food supply to the point that no fresh water fish in the state is safe to eat from a mercury standpoint.

And also, the air pollution, the sulfur dioxide and nitrogen oxides produce fine particulate matter, which if it gets into the lung tissue can

causes cardiac problems, respiratory problems and premature death. This is why we support this, which is actually cleaner, and I'm very hopeful, and I know I heard tonight that the response may satisfy the concerns expressed tonight.

Thank you.

(Applause.)

MODERATOR ROSENBERG: Before our next speaker comes up, the stenographer has asked me to pause for a moment.

I would like to thank State Senator James Marsh and State Representative Thomas McGee for being here.

(Applause.)

MODERATOR ROSENBERG: Thank you very much. You should know that if you are interested in carrying this subject on, tomorrow night we will be in New Haven, Connecticut, over the Essex line from New Haven to Long Island; and sometime next year, there will be a wind farm, potential wind farm being built off of Cape Cod, and they are putting together a demonstration project for some time next year. We will be the federal agency for that, as FERC is not involved.

Okay. Our next speaker will be William Crawford, and he will followed by Dorothy Allen.

WILLIAM CRAWFORD: Good evening. I'll try to be very brief. My name is William Crawford, 15 Howe Road of Nahant. I am a resident of this town for almost 30 years.

My concerns are that of the lobster, the lobster fishery, and to try to select the very, very best time of year in which to conduct this project.

I'm certainly not adverse to doing it in the wintertime. It seems to have the least potential damage, and I certainly salute that aspect of the proposal. But I would like to certainly let others know about this subject, comment and figure how to do it the very best it can be done with the least damage to our lobstering industry, lobster fishery, the migration of the lobsters.

To the issue of clean burning and nonpolluting or low emission polluting natural gas, this is certainly the right thing to do. To do it right, to do it quickly, and to take all safeguards to assure the public safety not only during this time of construction, but well into the future, are the issues which I think are most important.

Thank you very much.

(Applause.)

MODERATOR ROSENBERG: The next speaker is Dorothy Allen.

DOROTHY ALLEN: Hello, everyone. I am a little sick. I don't want to cough too much. I came here as a parent from Nahant, and I was hoping to see an Environmental Impact Statement, take it somewhere where I could take a look at the alternatives that are set into this pipeline.

Unfortunately, there was no Environmental Impact Statement or report out there.

One of the reports I picked up has a map, and actually I'm a little confused. I would like an answer to this, but it basically shows what I think is the scope of the project, which is this giant pipeline that goes from here all the way to this Northeastern New Jersey, and all of it is on land and doesn't go to Narragansett Bay, doesn't go through Rhode Island Sound.

And my one of my questions is, why does this go through Boston Harbor with this pipeline? Were other over land alternatives looked at? That is one of my questions, and perhaps you can answer

it.

I don't really know where it's coming from. So I don't know, but it first enters Salem, and if there is some way preventing it from going all through Boston go through the harbor, and through Weymouth and some of those spots.

The other issues, the one that Mr. Benson brought up, that is the issue of safety. I'm wondering where else in the United States we have pipelines of that sort.

How long have they been in operation?

Have they ever outlived their usefulness?

Have they ever had any problems with safety issues, environmental issues and whatnot?

And finally, I know how -- so that is another question I have. Maybe you can give us a history of these kinds of pipelines.

And the third question is concerns -- I don't know how this stuff is pumped. I assume through that all those miles of gas load, I am wondering if there is going to be some utility located along there to increase the pressure and what will that be. Some kind of a compressor

running. I don't know what kind of fuel. So I don't know. Those are three questions.

(Applause.)

MR. BONSALL: I would be very glad to provide you a copy of the alternative discussions here. I know the engineer has an FEIS here with him, and the discussion about alternative review is probably 30, 40, 50 pages in that document.

As I said earlier in talking about alternatives, at least a five-minute discussion. Let me give you the street talk. As part of the FERC review, the project was, in fact, required to look at a number of different alternatives. In some cases, particularly in terms of a land base of communities, there were alternatives that dealt with neighborhoods or a particular part of town. In the example of Peabody, one juncture is on the Peabody side of the Waters River. Through community meetings and discussions with local residents, there was a better route that they came up with, which was on the north side of the Waters River. So there were a lot of very focused reviews of alternatives.

As part of that process, we were also asked to look at a whole host of different

alternatives. It was everything FERC requires in terms of a no-action, meaning basically don't do a project, what is the result from that.

We were asked to look at what we termed at the time global alternatives; and as well during the course of the discussion other alternatives were proposed by individual communities, individual citizens. All of those reviews, almost four dozen of those, and to give you an example, and let me start in the wrong direction from the perspective of your question. A number of communities asked us to, in fact, increase length of the pipe in the ocean. There were several alternatives, four that would have gone through Southern New Hampshire in the ocean in the vicinity of Rye, New Hampshire, and then continue offshore across Cape Ann and continue down to Weymouth. Once we got to Weymouth, there were certain of those proposals would have taken the pipe over to Deer Island coming from the Weymouth area. There were at least four that did that, what we call the all ocean alternative.

Not only the meeting with the Mass. Lobstermen's Association for two years, but last January we gave a presentation, and back about a

month and a half ago, we made a presentation very similar to the one we provided tonight at the Boston Fisheries Forum. You might not be surprised to hear that the Boston Fisheries Association went on record with FERC opposing all of those all ocean alternatives, again the ones that were coming out of New Hampshire and going around Cape Ann; and, in fact, supported an outlying route that we showed you here tonight. They did that on the basis that they also hired an consultant, because as part of our process, we also looked at a whole host of alternatives that were land based. We actually had some of my personal favorites. Someone suggested, and we had to review it, because it got into the record, we were asked to put this pipe through the middle of the Big Dig in downtown Boston in order to get to land. Because it was proposed, we had to look at it. We had to look at alternatives that looked at Route 128, Route 95 and Route 93, railroad beds. There were a whole host of alternatives that were strictly land based. Those were also reviewed by FERC. They were examined by the project; and in the FEIS that came out in November, FERC concluded after exhaustive review that, in fact, the route

that we showed you was the preferred route with the least environmental damage in order to meet project needs and objectives.

We also had what was called a system alternative, a competing pipeline company, Tennessee Gas Pipeline proposed that they could provide the same line and match the same pressures that they were looking for that this pipeline was intended to meet. It turned out through analysis that their proposal included 50 miles of additional pipe on land between what, you know, Algonquin would have had to have done and Tennessee would have had to have done. FERC also looked at that and rejected it. There has been an exhaustive review of the land-based alternative, the ocean-based alternatives, and every alternative you can imagine, including a no build and no-action alternative.

So, and again, if you care to give us your name and address, or you see Ann, she will be glad to provide you a copy. If you don't want to give us your home address, we will give you that. Some people are sensitive to that. We will get you the information so can you take a look at that. I was going to ask Leon to --

MR. PROPER: The question about the existence of other water-based pipelines in the world. Just locally here, the gas that is coming from Sable Island is running through offshore pipelines on shore in order to be transported through the Maritimes system down to our area.

In the Gulf of Mexico is probably the most -- is the most prolific area probably in the world with respect to offshore pipelines. I don't know how many thousands of miles of pipe there are stretching between Texas and Alabama, but I'm sure it's at least three or 4,000 miles. That has been since the late '40s that that pipe has been installed, and some of it installed in the late '40s is still in service today. So with the proper maintenance they can last quite a long time.

But a lot of the gas that has been coming through this area has been coming up through pipelines from the Gulf Coast. So that has been the primary producing area of this delivered gas to us in the past.

Yes, sir.

MIKE RAUWORTH: You may have said this before, but if you can respond.

MODERATOR ROSENBERG: Please say your name.

MIKE RAUWORTH: Mike Rauworth. The transmission pressure that will be involved in this line, and how many isolation check valves along the ocean route that you will have involved so that we can get an idea of the cubic footage that will be released in a worst-case situation of a rupture.

MR. PROPER: Operating pressure would be 1440 psi.

The -- there is a valve on shore in Salem and in Weymouth that will be the two block valves for the line. So if anything occurred between the two lines they would be shut automatically.

MIKE RAUWORTH: The contents of the line was what is that, 15, 20 miles, 36-inch diameter times roughly 100 atmospheres.

MR. PROPER: It's about 30 miles of 30-inch pipe, yes, sir.

PAUL WHITE: Those are listed as a meter station. Are they satellite controlled, or they came be immediately shut off, or does someone have to turn a key and open the door and shut a valve?

MR. PROPER: I believe they are
satellite or remote.

PAUL WHITE: They can be satellite
controlled, or are they satellite controlled?

MR. BONSALL: They are remote
controlled.

PAUL WHITE: That is not in the FEIS.
It says meter reading station. It does not say
anything about a satellite-controlled valve anywhere
for any proposed project. I bring that up to let
you know.

MR. TYRRELL: Ray can explain the
difference between a meter station.

MR. HICKS: Ray Hicks, Duke Energy,
construction superintendent.

These valve sites that Leon mentioned
will either be satellite controlled or telephone
line controlled, but in any event, they would be
remotely controlled.

PAUL WHITE: From the time it closes
from the time it was previously open?

MR. BONSALL: I believe they
were -- somebody asked that question. It's about
three to eight seconds from the time you press the

button to the time the remote control valve starts to close.

AUDIENCE PARTICIPANT: What happens about this question about seeing the pipeline in case of an emergency.

MR. BONSALL: There is no compression in this part of the facility. That was the question somebody had asked at some point in time.

I'm sorry. Polly.

POLLY BRADLEY: I want you to, if you would answer John Benson's question about sealing it off in an emergency, if it's broken somewhere there in the middle by an earthquake, or a terrorist attack.

MR. BONSALL: That is what remote control valves do, they shut off the pipe at either end.

POLLY BRADLEY: Just at the end, but not in the middle?

MR. BONSALL: That's correct.

AUDIENCE PARTICIPANT: Just a refinement on that last part. The figure you gave was three to five seconds before the valve begins to shut, correct?

MR. BONSALL: Right. It takes the valve a minute or two to shut down. The valve begins to -- once the signal is made, it's a matter of seconds before the valve, the remote control valve starts to shut down. Then it's several minutes.

MR. TYRRELL: On oil pipelines you don't dare shut a valve off very quickly because of the flow. I assume it's the same principle here.

AUDIENCE PARTICIPANT: It's the size of the valve that is the key.

MODERATOR ROSENBERG: Any quick questions?

Sir, please stand up and say your name.

JOEL MARIE: I am Joel Marie. I am a lobster/fisherman from right here in Nahant, and I just have a -- the first thing I was wondering, you talked about the anchors of the ships and the anchorage. In Baltimore, where the tankers are kept, lobster traps are not good material for this. I don't know what would withstand those anchors. They are awfully large and very destructive. You take a lobster trap, you won't recognize it when they are done.

As far as the time frame, just like

everything I do myself, you plan it, and most things don't go on schedule. You appear to be a very well run company. What is going on that you are doing very well. You're very considerate. However, when I get behind schedule, I always just seem to have to go ahead and do it. And I hope you're not going to do that. If you get off of your planned schedule, I don't care if the gas doesn't get here for a couple more years. That is totally unimportant and not just because there is a gas down on Wall Street, and I am using it. Just because I don't think it's important if it gets here this year or next year; when it gets here, it gets here. The people that need the gas don't have it for a year, it doesn't bother me.

One more thought is, as Joe said, if this does make a major trap for lobsters and wipes them out in our general area completely, well, I have to go get another job, but how am I supposed to support my family during this time? There is no money coming in. If you shut off the lobsters, I don't get the catch any more, and I might even get a formal letter that says something long-winded, which amounts to defaults. That doesn't do me any good.

So a little more time for studying isn't going to hurt; and once again, if somebody is out of gas, I don't care. Bottle it into them. Bring the trucks. Give them the bottles. I don't care that the LNG is out there doing the anchor test on my traps, and I don't care the gas line doesn't go in. It's really not important to me. I understand the clean air aspects. That's a good one. But from my own selfish interests, as far as the lobsters, again what's in it for me is you -- not you people personally, but this project screws up my life.

What do you have for me?

MODERATOR ROSENBERG: Okay. Let me try and give it to you, the first question. And your first question --

JOEL MARIE: You don't have to answer about the anchor test.

MODERATOR ROSENBERG: With regards to the environmental. Unlike private industry, the Corps of Engineers deals with the law, and the State of Massachusetts sets the environmental windows, and those environmental windows are written into the permit; and Ted, would you like to talk about some of them.

MR. LENTO: I mentioned briefly --

MODERATOR ROSENBERG: Could you go to the mike, please.

MR. LENTO: I would just like to briefly mention that the corporate issues that will very likely have in it time of year restrictions when the work can and cannot occur. We are talking right now with National Fisheries, New England Fisheries and set the stage about the time of year restrictions and what we need after that.

So if a permit is issued, it will have in it a condition as to when the work can begin and when it has to end. If they are behind schedule for some reason, it will not affect the permit condition. That is known ahead of time before work starts. If you were to stop work because of the time of year, you can get stuck, that will happen, and the court does have compliance monitoring with our permits. We do check up on these things. So if you are concerned about timing issues, we know at this point, and you saw the slide, they are putting timing into it. We haven't yet written up conditions with a time we agree to honor, but that will occur.

JOEL MARIE: I guess my question though is more what if the contractor has a series of catastrophic equipment failures and gets delayed by three months? That's what I am concerned about.

You know, it could happen. That is sort of a delay, which would leave this trap open over a window when animals are moving from offshore to offshore.

MR. LENTO: I do hear what you are saying. You are talking about contractor's responsibility and what is the contractor liable for. When the permit is issued, the contractor will have a copy of that; and when they bid the job, they bid with these liabilities in mind. So if -- just there are other corporate issues, jobs that involve dredging. As you know, they do have timing windows on them, and I personally know several of them that dredging hadn't stopped, because the company had to remobilize the next season and at great expense to the contractor. So we are interested in protecting the resources, and we do respect the time window limit.

MARK VAN DER VELDER: Are you saying that -- I'm saying. My name is Mark van der Velder

from Swampscott.

And are you saying then that if for some reason there is a delay and a time window that comes to an end that you could fill in those trenches so that the lobsters will be able to move across that 13-foot drop?

MR. LENTO: Again, you have specific conditions. In general, though there is a concern about the lobsters and perhaps during the project. So there would be -- that is something to take into consideration.

MODERATOR ROSENBERG: I think the bottom line would be that there will be no work within those environmental windows, whether the contractor fails to perform or not, and I think that is one of the things that Ted needs to hear about making the environment -- bringing the environment back to where it merges as our concern.

Sir.

MIKE RAUWORTH: Mike Rauworth again.

You discussed a pretty important point about interface between the Corps and the proposer and the contractor that they engage to do the work. I think the gentleman from Swampscott, who just

spoke, hit upon an important concern, and that is there is the risk, as Joe Ayers has just identified that anybody can go broke. And so the worst case for what we are looking at is that people who have to do the work go broke at the worst time in the season with the trench open, and the lobster migration path disrupted; and of course, everybody is then capable of pointing fingers at each other and saying we didn't have it in the contract, et cetera, et cetera. We all know that Murphy's law never sleeps. So you can lose the important time frame that is critical in terms of the migration in the meantime.

Are you not in a position -- and this is my question -- to make the obtaining of a performance bond a condition of the permit so that if you have a lapse or fall on the part of the contractor that has been engaged, you can get somebody else in there to make sure that you don't have the adverse environmental impacts in that circumstance?

MR. LENTO: I understand what you are saying. If for some reason the contractor cannot finish up in time and close the trench, you think it

might be left open for a certain time period and affect the lobsters. If those are concerns, we hear them tonight, and there will be a response to those in the Corps' permit review. It might be the response might be a condition that states that that couldn't happen. What we are hearing about tonight, we will respond to it; and if the response could be that the trench has to be closed up by a certain time.

As far as the performance bonds, that is probably not the way we could handle it. When the permit is issued, the company signs it, and they need to comply with the conditions. If there is a condition that states they have to close the trench by a certain time frame, they have to comply with that condition, but we don't do it through a bond. It's an enforcement case.

MR. TYRRELL: Well, you may have a very excellent enforcement case, but you may also have destroyed a whole lobster season or worst in the meantime. That is the point of a payment bond. Normally, a payment bond is a matter between the Algonquins of the world and the contractors that they hire. We understand that that is not a Corps

project in the same sense that a dredging project would be when you guys goes hire a dredging contractor. Then you wouldn't require a performance bond, et cetera. My point is that having the remedy, or having the stick, if you will, of an enforcement action may be a threat against your permit holder that they might take very seriously; but if the default of the contractor creates other problems, you know, the fact that you later on six or eight years down the road end up whacking them with a big penalty, may be great satisfaction for the newspapers or whatever, but it doesn't help the lobsters.

MODERATOR ROSENBERG: Your point is well taken.

Yes, sir. Sir.

TOM COSTIN: Yes. Tom Costin from Nahant.

I have a similar question in that regard. My concern is monitoring the progress of the construction. For example, I heard tonight that most of the project directors here want to make sure that we have as -- that we have as low impact on the environment as possible; therefore, the bottom line

who is going to be best.

What happens if we have long delays in January, February, and now this contractor is coming upon a May deadline, and he decides to go with the pipeline jet, and we have migration of the lobsters. And who is going to be monitoring that, because we could then have a tremendous jet and flow of soil and sediment down the bottom, which could impact the lobster migration, as Mike was saying.

This year for the following year and forgetting the fines and all, what is going to happen to the lobster community? So I'm concerned about the progress of the construction and monitoring.

MR. LENTO: Well, basically, there are restrictions on state permits, the FERC, the Corps' permit. They all have different conditions. We have compliance standards in place. To monitor the work, the FERC in particular has compliance perspectives and environmental monitoring. The Corps goes by that condition of monitoring, also.

TOM COSTIN: Well, I ask you, because all of us who live here in Massachusetts know that we have with the Big Dig a lot of noncompliance, and

there are problems such as the span of bridges; and if we have one problem on here, and it could be a period of three or four weeks late in the spring, it could have -- or even early in the fall, if it's not too early, the lobster migration is late, we could have significant problems.

MR. McLACHLAN: I think as far as oversight, in our past projects, and we fully expect it on this project, there will be a tremendous amount of oversight.

Leon talked about the contractor before, and it starts at that level, and we are required by our permit conditions to incorporate all the considerations both from a timing standpoint, construction methods, how we are going to handle environmental conditions, so on and so forth, being incorporated into the actual contracts for the actual offshore contractor that is going to do the work. It is the same thing for on shore. It is something we have done for years. The oversight, which would be, you know, we will start on the company level. We will be making sure that the contractor people, the project construction engineer, will be overseeing the contractor. We

will have our own inspection of personnel on the actual construction project offshore, both on the ship, all the different aspects with the contractor, in the office, offshore, monitoring the construction projects.

Also, environmentally, we will have environmental inspectors monitoring offshore and also the onshore facilities, all through your work. There is actually two or three layers there. The people that work for us, the actual contractors abide by the permit conditions; and also the Federal Energy Regulatory Commission will have inspectors also on the project looking to make sure we basically adhere to all our permit conditions. And that goes for again, timing, the construction methods. We just can't switch our construction methods. We have time windows we have to meet. We have construction methods that were permitted, and it took months and months to come up with these construction methods in consultation with the agency. So we have to basically adhere. We do have to adhere to those construction techniques.

The other thing is the state will also have environmental inspectors inspecting on the

project. So we have all these people on one project, and the way we want to coordinate it is we start in the beginning of the project, and we have environmental training, and we have coordination meetings, with all the different inspection staff, our staff, the contractors staff, to make sure that everybody is on the same page.

We make sure that everybody fully understands how things are supposed to be done. The contractor already has a contract. He has permit conditions, and we coordinate how the oversight is done. One of the important aspects is what happens if something goes wrong, or the lagging behind.

All of this, and I can cite an example up in Maine. If you build 200 miles of pipeline in four to five months, from the time you cut down the trees until the time the grass is growing, it took a tremendous amount of planning and oversight both on our part and all the different players in the state and federal agencies through the planning. You know, if we ran behind, we started -- we made sure we got with a contractor and make sure he understood he was behind, where he has to be. If there was a specific environmental issue, we would stop the

contractor, or we correct it at a meeting and leave in consultation with the agency. They were very much involved in the process. I can appreciate your question. It's a very important question and a concern.

TOM COSTIN: On the same line, on the land you have other studies where you built projects, you know what to expect, and you can go from that.

MR. McLACHLAN: Right.

TOM COSTIN: Do you fill in areas where lobsters migrate before? Do you have post construction environmental impact studies that would be beneficial to this project?

MR. McLACHLAN: As far as the shore off the Boston Harbor, no. Elsewhere in the world projects like this have been done. That is why we brought in Leon Proper and his group. Their expertise is in offshore construction. And that is why working with the agencies, one of the issues of restoring the bottom of the ocean to preexisting conditions, such as the hard bottom restored to hard bottom; soft bottom, soft bottom; contours; time of year restrictions; all of those type of things and

how that fits into the actual construction sequence, the timing, so on and so forth. So as far as actual studies off the Boston coast, no, we don't, but taking the expertise from other places in the world, including the Gulf of Mexico, we are bringing in a lot of people to help us to make sure we do it properly.

MODERATOR ROSENBERG: I thought I saw a question here.

Yes, sir, and you'll be next.

SKIP FRASY: My name is Robert Frasy. I am a selectman here in town.

Where you are talking about doing this project and digging a trench from Beverly down to Weymouth, I'm wondering if perhaps this project shouldn't be done in two or three phases, each phase down to 90 percent completion so that we don't go out on the first phase and dig this trench all the way around and then someone doing a second pass of the trenching or we come up with a problem, if we have to go back and reengineer a solution for, and then have this trench already dug down, you know, four to six feet, and wait on a solution to be found. Perhaps it can be done in one section to

completion and make a best effort to do that. You can consider either doing another third or doing the second part of the project, but I think that where there is so much to be lost, I think that should be considered.

MODERATOR ROSENBERG: Sir.

AUDIENCE PARTICIPANT: I'll pass.

MODERATOR ROSENBERG: Any other questions here?

Yes, sir. One. Two.

JAMES WALSH: I would like to know if --

MODERATOR ROSENBERG: Could you please --

JAMES WALSH: James Walsh, Nahant.

Have you considered the question Mr. Frasy has suggested as an alternative before you do anything?

If I understand the problem, the problem is if you dig the trench from one end to the other then anything -- if something goes wrong, you have got to fix the whole thing; but if you do it in phases, then if something goes wrong, you haven't blown the whole remainder of the project.

Have you considered that as an

alternative? Has anyone considered that?

MR. PROPER: We have talked about that.

One of the main issues we are trying to deal with right now is fitting within the window. We think that from trying to weigh all the issues, or trying to balance, we were looking down, we did the work. We did it, you know, with respect to the contractors, exactly how long it will take to lay and trench and backfill. There may be ways to optimize that schedule, but right now, we are beginning to start and continue uninterrupted will be the most efficient use of time. But that may be counterbalanced by some of the other issues that have been raised tonight, but right now we are thinking from a time perspective. We need to be as efficient as possible in construction. That is why we proceeded with this start to finish process.

PEG HEINRICH: Peg Heinrich.

MODERATOR ROSENBERG: I'm sorry.

PEG HEINRICH: Peg Heinrich from Nahant.

Upon completing I'm wondering do you test the pipeline, and if that test would be within the nine-month project time line?

MR. PROPER: Yes, we do test the

pipeline. We test the pipeline in accordance with the Federal Department of Transportation requirements. That is done by filling the pipeline completely with the water and then pressure up that water to a level actually greater than actual operating pressure. It's completely tested. It's held at a certain number of hours, probably eight, and once it's completed, then the pressure is released and the water goes back into the bay from which it is taken. So yes it's fully tested.

PEG HEINRICHS: It's tested with seawater?

MR. PROPER: It's tested with seawater, that is correct.

MARK VAN DER VELDER: Mark van der Velder from Swampscott.

Just to kind of go back again not to harp on this issue. About the fact that you do the whole, the whole pipeline at one time. You build the trench.

Have you considered what the tidal and the undercurrents would do to that trench? Like you start from the top there, and by the time you get to it's actually a pipeline, will there be any

concerns, will you have to be trenching, because maybe two of three feet hasn't been filled in yet, which is really adding more time onto the project.

Sorry. Just one more question. In the on-time performance of some of these projects, what is the record of the company that is doing this?

MR. PROPER: The first question with respect to the trenching, as each pass is made, the pipeline relays to the bottom of the trench immediately after the pass of the plow and the jet. So within, let's say, 500 feet after the jet or the plow, the pipeline is already on the bottom of the trench. Any subsequent erosion of the trench or backfill with the spoil, whatever might occur, you know, during a storm event, or whatever, it's going on top of the pipe. The pipe is already as steep as it can get for that pass.

PAUL MARTIN: The pipe is laid first. They don't trench 20 miles and then lay the pipe. The pipe is on the bottom, and then the trench is formed around the pipe that it settles into it. So the notion that, you know, it might be 20 days or something from when they started trenching to when the pipe is lowered into the trench is backwards.

Actually, you put the pipe down first and then do the trench. As Leon says, it's only a matter of minutes and then a few hours or whatever before the pipe is lowered into that trench.

MARK VAN DER VELDER: Thank you for that clarification.

MR. PROPER: You had another question?

MARK VAN DER VELDER: On performance of the company that is laying down the --

MR. PROPER: Well, two things about it. The estimates we use, we hope we are a bit conservative at this point from just our historical background. We try to evaluate the weatherability. We talked to the contractor about which equipment they will be using, and tried to emphasize that we are interested in some of their bigger equipment, as opposed to smaller, cheaper equipment. We are interested in something that is bigger, more resistant to weather, that sort of thing.

So the industry in general, I think, has a good record for standing within the time frames that have been defined for different projects. But most of the time that requires that up-front planning and has weather and the right equipment at

the right time.

MODERATOR ROSENBERG: One more, sir.

SELECTMAN LOMBARD: How big is Algonquin?

MR. BONSALL: The size of the corporation; is that what you mean?

SELECTMAN LOMBARD: That was my first question. The second question is.

AUDIENCE PARTICIPANT: Richard Lombard, Selectman.

SELECTMAN LOMBARD: The second question was I was really surprised by a major project like this presentation, you wouldn't have the actual video of the underwater scenes of actually this, these machines digging and laying the pipe.

AUDIENCE PARTICIPANT: It's like logs and sausages.

MR. BONSALL: Duke Energy is close to a \$50 billion corporation. We can get you a closer number, but I think that gives you the magnitude we are dealing with. I guess I'm personally stunned. I thought the Powerpoint was pretty good. We need to save something for the conservation commission when we come back in. We will see a video at that

point.

SELECTMAN LOMBARD: The size of this equipment, I am surprised you don't have it on video.

JOE AYERS: I have two small questions here. You have some sort of a galvanic system for electrolysis.

Does anybody know anything about that?

And, secondly, there is a lot of toxics in Boston Harbor. My favorite being the medical waste that there is some guy that was using (inaudible) to get rid of all the radioactive medical waste from Boston hospitals for about 30 years. And I know that the EPA had hired our boat to go out and scan or look for these barrels and couldn't find them.

Do you know -- are you sure that there are no areas of toxic waste in the pathway that is going to be stirred up?

MS. PEMBROKE: I am Ann Pembroke with Normandeau Associates.

We have done extensive surveys of sediment conditions. In consultation with DEP, the Army Corps felt that we did not need to do sediment

testing, because this is not a typical dredging project, but DEP with some of the same concerns that you had asked us to look at some specific areas.

We have done quite a lot of work up in the Salem area, extending out to what we call log post 4.

So basically Salem Bridge for four miles along the bridge, there is an area from -- and we have identified some areas of contamination there, but it's a pocket. And we have also done an area from about the 7 to 9.5, which is noted on the navigational chart as a discontinued dumping area. And we took 74 down to the project depth, analyzed four different sediment horizons in there, and tested material that contained sufficient amounts of silt in it to be an indication that there -- it could contain contaminants in a significant level. That has all has been tested and found to be clean of anything but naturally occurring levels of arsenic.

Then we have also done a lot of testing down in the Weymouth area. Again, we have found some pockets of contamination in that area. The more significant area up in Salem where we found high levels of chromium, which shouldn't be a

surprise to residents of that area, we did biological testing on that as well and found that with the construction techniques that we're proposing, this movement, or manipulation, sediments in that area does not pose a significant risk to -- for toxicity to aquatic organisms.

MR. TYRRELL: Can I add one more thing, Jon. Mike Tyrrell.

In terms of cultural resources, we ran a magnetometer across the whole route. There were various things. We have identified a number of targets that the archeologists are diving on now. Are they going to last? So our fingers are crossed. Inside we have a profile of the whole sweep of underwater surveys.

POLLY BRADLEY: Just listening to this, I see one spot where the Corps might be able to be very helpful, and that would be require some independent oversight. The way this project has been so fragmented, and they have talked with one agency, and another agency and people, environmentalists here, if you require some general oversight of the entire project, and don't leave it just to the company. As well meaning as they may

be, there is a conflict of interest.

I know that in Chelsea Cheek when -- when Mike Berger was turned down, and you dug in, and I should say whoever did it, dug in and then buried the contaminated waste and covered it over. They had some very good oversight there. If you could require something equally good or better here, we would appreciate that a lot.

MODERATOR ROSENBERG: That is true.

That's a point well taken. By the way, there is a project, and since I don't see any members of the press here, we finished the work this morning, at 9:30, more than three months early from the program schedule, more than two years early from the original schedule at 1.2 million below the budget. So that --

(Applause.)

MODERATOR ROSENBERG: -- I understand the disposal problems we face in Massachusetts.

Thank you.

Yes, sir.

PAUL AYERS: I am Paul Ayers.

I just want to know if the permit is going to be written such that no work will take

place between, you know, May and October.

MODERATOR ROSENBERG: Okay. Ted.

MR. LENTO: Well, we don't know what it will be. We are still discussing those issues. I can't guarantee at this point what we are going to do with it.

MODERATOR ROSENBERG: I would like to assure you that those conditions will be according to Massachusetts state law.

All right. Is there anything else?

Any more questions? It's ten o'clock.

Gosh, we have heard -- my last card. I have got to read it. We have heard a great many thoughtful comments and a lot of questions, and a lot that Ted is going to have to start working on as soon as he gets back to his office.

Finally, before we say good night, I would like to extend my appreciation to the Board of Selectmen in Nahant for, I guess, this incredible facility for the second time, third time.

And I thank you all for providing your insight to this process that will lead to the terms, or whatever.

Thank you very much. Good night.

(Applause.)

(Whereupon, at 10:06 p.m., the hearing
was adjourned.)

C E R T I F I C A T E

I, Marianne Kusa-Ryll, Registered Merit
Reporter, do hereby certify that the foregoing
transcript, Volume 1, is a true and accurate
transcription of my stenographic notes taken on
December 10, 2001.

.....

Marianne Kusa-Ryll, RMR